

AGRiVIEW

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Northeast Dairy Business Innovation Center Spotlight

In celebration of Dairy Month, we would like to share with you a glimpse into the work done in the past several months at the Northeast Dairy Business Innovation Center (NE-DBIC), hosted by the Vermont Agency of Agriculture, Food and Markets. This center, one of three USDA-funded Dairy Business Innovation Initiatives in the country, supports the dairy industry in the 10-state Northeast region.

NORTHEAST

DAIRY BUSINESS
INNOVATION CENTER

Many of the initial projects focus on Vermont's dairy landscape and include projects that address

dairy farmworker and food safety, marketing opportunities, market and distribution research, technical assistance resources, and several competitive grant rounds for dairy farmers and processors.

For more about what the Dairy Business Innovation Center is doing, see pages 5 and 6. To learn more about the NE-DBIC, visit agriculture.vermont.gov/dbic

June is
Dairy
Month!

AGRiVIEW

**Vermont Agency of
Agriculture, Food & Markets**

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THE VIEW FROM 116 STATE STREET

The federal farm to school grant program championed by Senator Leahy has been critical to the success of farm to school in Vermont and has helped build the robust public private network we have today. As a result, Vermont continues to lead the country in its farm to school efforts. A survey of over 171 Vermont schools found that nearly 90% of them were engaged in farm to school activities.

The investment in farm to school programs are no longer in question. We know that children who are engaged in farm to school activities eat healthier, learn better and are more active in their communities. And we know that these impacts can last a lifetime. We also know that our farmers and food producers benefit from these investments

through increased sales to local institutions or through opportunities to connect with their community by hosting field trips or visiting classrooms. An investment in farm to school is an investment in the health of our children, the strength of our local food systems, and the resilience of our communities.

As the pandemic upended our lives over the past year, we saw first-hand just how important farm to school is. Schools with strong ties to the local food system were able to source from farmers and producers in their communities as our larger food system reeled from the pandemic. Farm to school partners organized to send thousands of seed packets to children who suddenly found themselves learning from home and rallied to support the heroic efforts of school food professionals across the state.

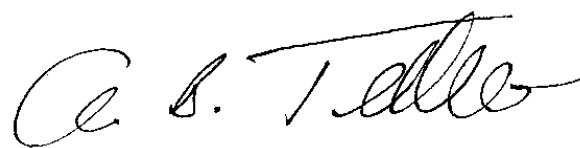
The Agency of Agriculture, Food & Markets mobilized our farm to

school grant program to help schools adapt to the challenges of feeding kids in a whole new way through critical infrastructure purchases. Last fall, with an appropriation of coronavirus relief funds from the legislature, we awarded \$100,000 in farm to school grants to help schools and childcare providers build outdoor learning spaces, expand school gardens, and make other investments in their learning environments to promote farm to school and adapt to the challenges caused by the pandemic.

With food insecurity rates up 33 percent since the pandemic started, we recently offered a community supported agriculture grant to Vermont childcare providers.

As a result, thirty-four childcare businesses will be receiving subsidized CSA shares from Vermont farmers this season. That means hundreds of children and families eating more fresh local food this summer, and dozens of farmers with new customers and sales. This new grant is part of a larger effort to expand farm to school to early childhood education.

The pandemic has exposed what so many of us already know – that in order to thrive as individuals and as a society, we need to support the connections between good nutrition, resilient food systems and strong communities. Investing in farm to school is one of the best ways we can do that.



Anson Tebbetts, Secretary, Agency of Agriculture, Food & Markets

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This Month's Recipe

Homemade Honey Butter

Celebrate Dairy Month and National Pollinators Week at the same time.

Ingredients

- 1 cup butter, softened
- 1/3 cup honey
- 3 Tablespoons confectioners' sugar
- 1/4 – 1/2 teaspoon sea salt (optional)



Instructions

1. In a large bowl using a hand-held mixer or stand mixer fitted with a paddle attachment, beat the butter for 1 minute on medium speed until completely smooth and creamy. Beat in the remaining ingredients, starting with only 1/4 teaspoon of salt. Beat on medium speed until completely smooth. Scrape down the sides of the bowl with a rubber spatula as needed. Taste. Add more salt (up to 1/4 teaspoon) if desired.

2. Serve with a drizzle of honey and/or a sprinkle of sea salt. Cover leftovers tightly and store in the refrigerator for up to a week or so.

Notes

1. Go ahead and freeze some! For best results, chill the honey butter first in the fridge. Then separate what you want to freeze. It will need to be wrapped up tightly to preserve the flavor. Freeze for up to two months. Thaw overnight in the refrigerator.
2. **Unsalted or Salted Butter?** Both work– you may want to leave out the sea salt if using salted butter. Or keep it in for a more profound salty/sweet flavor.
3. **Sea Salt?** Start with 1/4 teaspoon of sea salt and add more as you please.

Think how delicious this will be on scones, waffles, muffins, slice of toast – really anything you would put butter on. Maybe with some cinnamon?

C O N N E C T

W I T H U S



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VERMONT AGRICULTURE & FOOD SYSTEM PLAN 2021 – 2030:

Dairy

Editor's note: This brief is part of the Vermont Agriculture & Food System Plan 2021-2030 submitted to the legislature in January 2021. To read the full plan, please go to <https://agriculture.vermont.gov/document/vermont-agriculture-and-food-system-strategic-plan-2021-2030>

by Laura Ginsburg, VT Agency of Agriculture, Food & Markets

Author's note: the dairy brief was written at the end of 2019 and published in early 2020. Since then, many of the specific numbers have changed. For consistency, this article will match the dairy brief. For brevity, the article has been edited to fit into the Agriview format.

Part 1

Current Conditions

Vermont's 658 dairy farms (470 conventional and 188 organic) produce about two-thirds of all milk in New England, with bulk of it being processed in one of the state's 151 plants in fluid milk, cheese, butter, ice cream, yogurt, and powder. In 2010, for contrast, there were 1,015 dairy farms and just 66 processors, which is illustrative of the rapidly evolving nature of the state's dairy sector and the success of value-adding processing as a viable option.

Vermont's dairy farms encompass a variety of scales, production practices, and geographic locations. Unlike the rest of the nation and making Vermont and New England unique and well-positioned to be the leader in dairy innovation, over 80% of all dairy farms milk fewer than 200 cows. The small, localized nature of the dairy sector gives it greater capacity to develop in concert with the ever-changing dairy market.

The state's dairy sector, across all scales and production methods, has been affected by the extended downturn in pricing over the

past five years, which has been exacerbated by decreased exports and changing political landscape. With the continued overabundance of milk production and record levels of processed products in storage, conventional milk price forecasts do not show a meaningful increase for potentially years to come.

Dairy farmers are also faced with several other concurrent, high-stakes issues. At the forefront for Vermont are water quality and other environmental concerns, both of which are being addressed by regulations at the state and federal levels. The resulting changes to regulation have increased the financial and reporting burden for farmers. The extended downturn in pricing has led to a loss of equity for many farms and the inability to maintain equipment or infrastructure. Finally, changing consumer preferences and a general negative public perception of dairy farming have created a perfect storm to make the current situation one of the most challenging the sector has ever experienced.

In this article and a subsequent one, the following primary issues will be reviewed: scale bifurcation, consumer trends, forage-based production systems, value-added processing, and alternative milk pricing strategies. Finally, sector recommendations will be discussed.

Issue – Scale Bifurcation

The dairy industry, much like other commodity production systems, is a least-cost production model in which farms must get bigger and produce more for less per-unit in order to remain viable. As medium-sized farms increase in size, and smaller farms

- Sales of non-dairy milk alternatives are projected to **increase 108%** from 2013 to 2023, compared to a **27% decrease** in dairy milk.
- Since 200, pounds of fluid milk consumed annually per person in the U.S. has decreased from 197 to 146, but pounds of other dairy products (yogurt, butter, cheese, ice cream, and other frozen products) has increased from 71 to 81. When factoring in the pounds of fluid milk required to make each pound of other dairy product, the total annual per capita milk consumption through all products has increased from 595 to 646.

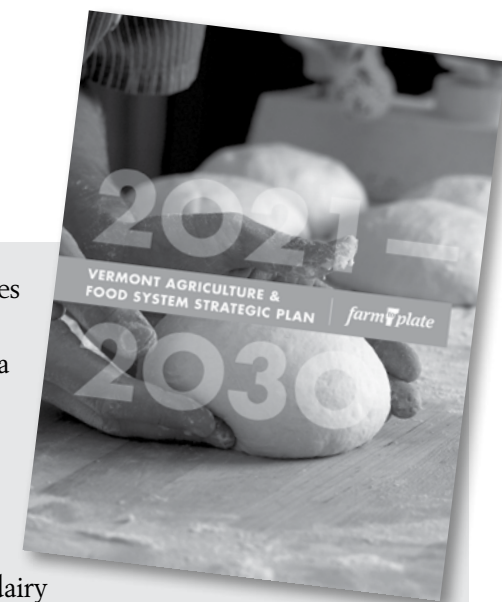
tend to stay small, there is a loss of farms considered “ag of the middle”. This scale bifurcation is leading to two opposite production systems in a commodity market which does not value differentiation of production scales. Industry information, from animal housing to nutrition to genetics, is more focused on larger-scale farms and production systems, creating a gap in research and services for small farms. Essentially, large and small farms have very different need, and the national dairy industry is mostly focused on providing resources appropriate for larger farms. As Vermont's dairy sector is primarily made up of small farms (314, or 43%, had fewer than 50 cows in 2018), it is critical that they are positioned for success and have the

opportunity to compete differently than their larger counterparts.

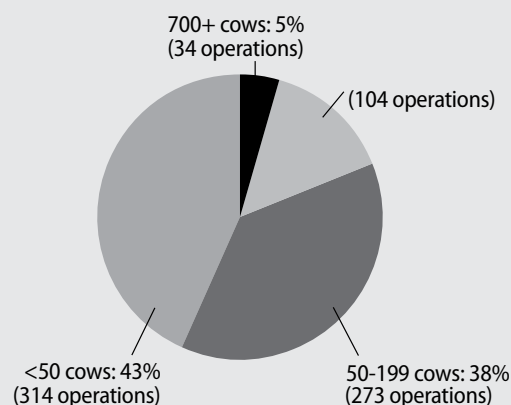
Bottlenecks and Gaps

- Small farms are more likely to be family run, rely on off-farm income, have multiple diversification strategies for additional income, and have fewer hired workers, which can mean that issues such as poor health and loss of income from other sources have a greater impact
- Smaller farms are disproportionately affected by the cost of regulatory projects as their milk checks and value of assets are generally lower
- Commodity systems do not have the capability of differentiating

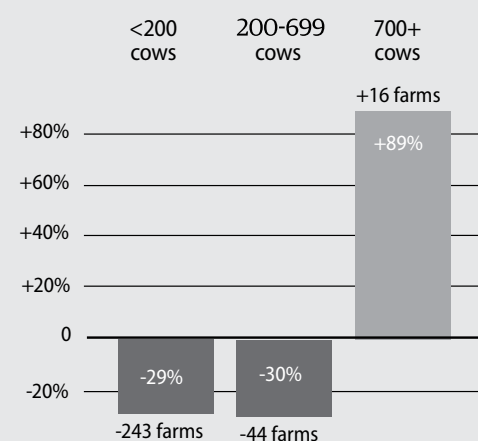
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Distribution of Vermont Dairy Farm Sizes, 2018



Percent Change in Number of Vermont Dairy Farms, 2011-2018, by Farm Size



Vermont COVID-19 Agriculture Assistance Program Impact

DAIRY SUMMARY

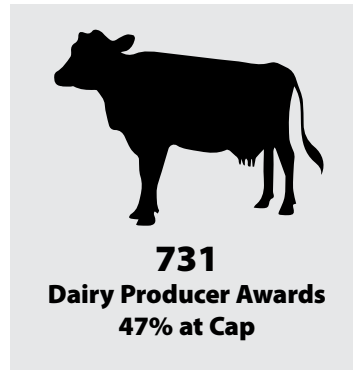
Between August and December 2020, the Vermont Agency of Agriculture, Food & Markets distributed \$25.6 million in Vermont COVID-19 Agriculture Assistance Program (VCAAP) grants to agriculture, food, and forestry businesses and organizations.

The purpose of the program was to help offset revenue losses and expenses the sector experienced due to market and business disruptions related to the COVID-19 pandemic. Funding for VCAAP was appropriated by the Vermont State Legislature

from federal Coronavirus Relief Funds in four bills that determined eligibility criteria and maximum award amounts.

The Dairy Producer and Processor Application initially launched on July 17, 2020 and closed on October 1. The application relaunched on October 19 with legislative changes and officially closed again on November 15. In sum, there were 793 awards for total of \$18.3 million sent to dairy producers and processors. 73% of Vermont dairy producers and processors received an award.

Milk producers, if



qualified, were eligible for grants to reimburse for demonstrated economic harm up to the following maximum amounts:

- Small farms received up to \$18,300.
- Certified small farms received up to \$34,300.
- Medium farms received



- up to \$56,000.
 - Large farms received up to \$100,000.
- 47% of milk producers awarded received the maximum award for their farm size.

Dairy processors, if qualified, were eligible for grants to reimburse for

demonstrated economic harm up to the following maximum amounts:

- Processors of less than 500 lbs. of milk per day received up to \$31,000
 - Processors of 500 – 9,999 lbs. of milk per day received up to \$40,000
 - Processors of 10,000 – 49,999 lbs. of milk per day received up to \$50,000
 - Processors of 50,000 lbs. or more milk per day received up to \$60,000
- 53% of dairy processors awarded received the maximum award for their business size.

Food System Plan

continued from page 3

Opportunities

- Small farms are exiting the commodity system by adding value to their own milk or producing milk for a specialty processor
- Both farm scales have value for Vermont and the processing that occurs here, and their value should be clearly understood and delineated to ensure that regulations are appropriate for all scales
- As Vermont has a critical mass of small farms and high-quality technical and business assistance providers, there is a clear opportunity to position the state as a leader of small farm systems

Issue – Consumer Trends

The dairy marketplace is rapidly evolving as new consumer groups shape the kinds of products desired and how they are purchased. The Gen X, millennial, and Gen Z groups are pushing companies for increased transparency, relationships with producers, and values-oriented production methods, and are stepping outside of the traditional grocery store for purchases. There is a clear market opportunity for products that meet specific production criteria, including environmental standards, animal welfare conditions, and social benefits. While Vermont's farm scale is small compared to other areas in the country, and thus better positioned to meet consumer demands, there is a significant concern about

dairy farm practices which could impact the entire supply chain as consumers move away from products that do not meet their values. Further, milk alternatives in refrigerated, shelf-stable, and frozen forms have impacted product sales and market share, a trend that does not appear to be easing in the near future.

Bottlenecks and Gaps

- Dairy production strategies, value chains, and processing equipment are well-entrenched and difficult to change quickly in response to consumer trends
- Much of the industry is focused on increasing fluid milk consumption instead of capitalizing on other value-added products that have increasing consumption rates

- Vermont producers must market to a wide variety of consumers and consumer trends can vary widely from coast-to-coast
- Conventional dairy processors have been slow to change marketing strategies, particularly on fluid milk, making it difficult for consumers to differentiate between brands and attributes
- Access to reliable and timely market research and implementation of findings can be limiting as consumer trends can change rapidly

Opportunities

- Small scale farms and processing can be more agile in responding to consumer trends, changing production strategies or product offerings, and are capable of obtaining premium

- prices for their products
- Nearly all of Vermont's dairy processors fit into the size category consumers are seeking out, therefore providing them with the knowledge and skills on how to attract new consumers while meeting production criteria is an opportunity that has strong potential for market gains
- In order to make Vermont fluid milk stand out in the grocery cooler and generate consumer interest, processors could develop new labeling strategies for the common plastic milk jug

Part 2 – in the July edition of Agriview:

- Forage based production systems
- Value-added processing
- Alternative milk pricing strategies

Cleveland Farms

Adaptability in Grazing Leads to Economic Returns

By Cheryl Cesario,
UVM Extension
Grazing Outreach Specialist

**NORTHEAST DAIRY BUSINESS
INNOVATION CENTER**

The following is a highlight of one cohort farm involved in the NE-DBIC-funded transition to grazing pilot project lead by Cheryl Cesario of UVM Extension.

When I first met Scott Cleveland in 2018, he was getting ready to seed down 65 acres of his best corn ground. He had also just signed an NRCS contract to install the necessary

infrastructure to implement a rotational grazing system on these newly seeded fields. The farm is in Pawlet, in the Mettawee Valley, where the soil produces some of the highest corn crop yields in Vermont, so I was intrigued as to what his motivation was for doing this. His answer was simple: if he could grow great corn here, he knew he could grow the best pasture crop for his cows as well.

Cleveland Farms was established in 1985 and at

its current location since 1994. Scott and

his wife Traci run the farm together, along with their eldest son Justin who is on the farm full-time as well. The milk from their 80 milking cows is shipped to Agri-Mark/Cabot. While Scott's main motivation in transitioning to a grazing-based operation was to find a more economical way to produce milk by reducing feed costs, he had some initial hesitations. He says, "I was worried it was going to be too time consuming and that we weren't going to gain enough benefits from it."

By September 2019, Scott had installed all of the fence, laneways and water system as outlined in his contract and I went to visit him to see the finished results. As we stood there looking at his fields and admiring his achievement, he laughed and said, "So now what happens?"

They say the journey of a thousand miles begins with one step, but that first step can be the most difficult. Scott had told me that it was critical that he get this right. He didn't have room for error. As a jumping off point, we roughly measured out paddock sizes and discussed where polywire subdivisions might go, but really, the key to success was going to be leaving at least a 4-inch post-grazing residual height as well as maintaining adequate recovery periods between grazings. These two things are critical in preventing overgrazing damage and keeping the pasture yields productive.



Scott and Traci Cleveland of Cleveland Farms

For Agricultural Events and Resources Visit:

- The VT Agency of Agriculture Events Calendar: <https://agriculture.vermont.gov/calendar>
- UVM Extension Events Calendars: https://www.uvm.edu/extension/extension_event_calendars
- Vermont Farm to Plate Events Calendar: <https://www.vtfarmtoplate.com/events>
- Northeast Organic Farming Association of Vermont Events Calendar: <http://nofavt.org/events>
- DigIn Vermont Events Calendar: <https://www.diginvt.com/events/>
- Agricultural Water Quality Regulations: <http://agriculture.vermont.gov/water-quality/regulations>
- Agency of Ag's Tile Drain Report now available here: <http://agriculture.vermont.gov/tile-drainage>
- VAAFM annual report available here: http://agriculture.vermont.gov/about_us/budgets_reports
- Farm First: Confidential help with personal or work-related issues. More info call: 1-877-493-6216 anytime day or night, or visit: www.farmfirst.org
- Vermont AgrAbility: Free service promoting success in agriculture for people with disabilities and their families. More info call 1-800-639-1522, email: info@vcil.org or visit: www.vcil.org.

For more agricultural events visit our *Funding Opportunities & Resources for Businesses* webpage at: http://agriculture.vermont.gov/producer_partner_resources/funding_opportunities

A lot of farmers who transition to grazing feel like they are "wasting feed" when the cows don't mow the field down like a hay mower would. However, pushing the cows to do so can be a recipe for disaster. Scott says, "One of the hardest things was to leave the residual. It's hard to change that mentality. It's not like a lawn. I was amazed at the recovery." Those two months of grazing at the end of the 2019 growing season, gave Scott the confidence to move into the 2020 season full steam ahead.

Last year brought challenges of course, and like many dairy farmers Scott had a period of time where he was dumping milk and trying not to overproduce. However, his successes with grazing have been phenomenal, especially for someone in their first full year adapting to a new management

system.

By comparing Scott's rations during the grazing and non-grazing seasons, we were able to determine that his herd was obtaining 64% of their daily dry matter intake (DMI) from pasture during the months of May, June, August, September and well into October. In July, the dry weather conditions really slowed down pasture growth. Scott adapted accordingly and utilized a hill top pasture as sacrifice area and increased his stored feed ration, while decreasing pasture intake to 28% DMI. This shift was critical in preserving pasture forage yields for the remainder of the season.

Through all of this, his average milk production maintained at 65 pounds per cow. Based on current rates, we were able to estimate the

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Announcing Grazing Transition Technical Assistance Cohorts

By Kathryn Donovan,
VT Agency of
Agriculture, Food & Markets

NORTHEAST DAIRY BUSINESS INNOVATION CENTER

The Northeast Dairy Business Innovation Center (NE-DBIC) has selected two contractors to receive funding that totals \$188,000 to develop cohort models of technical assistance for dairy farmers interested in integrating rotational grazing into their herd management plan.

Connecticut River Watershed Cohort

The White River Natural Resources Conservation District (NRCD) and Caledonia County NRCD in Vermont will collaborate with the Grafton County Conservation District in New Hampshire and the Connecticut River Watershed Farmers Alliance (CRWFA) to develop a cohort of at least six dairy farms in the Connecticut River Watershed who are interested in transitioning to grazing. A second cohort may form if there is enough interest. The Districts will work together with the CRWFA to select eligible farms and build lasting connections to local technical service providers. Farmers

participating in the cohort will have access to mentor-based, farmer-to-farmer programming and a dedicated grazing specialist. Each cohort member will have a Grazing Plan and a Whole Farm Conservation Plan developed for their farm by the conclusion of the program. Farmers will also have access to grant funds to support implementing aspects of grazing systems. Dairy

farmers in Caledonia, Orange, and Windsor, counties in Vermont and Grafton County in New Hampshire should contact Jennifer Byrne at whiterivernrcd@gmail.com or 802-369-3167 or 862-432-3980.

Pennsylvania-New York Cohort

The project brings together educational partners Pasa Sustainable Agriculture and Cornell Cooperative Extension that will use the

Dairy Grazing Apprenticeship (DGA) to help beginning farmers launch new grass-based dairies or improve and increase the acreage and quality of grazing on existing farms where they work as managers. The project will increase the success of the DGA program and better prepare beginning farmers for their next opportunity by anchoring our curriculum in peer-to-peer cohorts. Cohorts that blend current apprentices and recently graduated

journey workers will be connected through a series of video conference calls, webinars, field days, pasture walks, and conference events. Social support and exchange of ideas will help prepare beginning farmers for their next opportunity and provide a peer network to help sustain them over their dairy careers.

For more information on the PA/NY cohort, contact Aaron de Long at aaron@pasafarming.org or 814-349-9856 x709.

NE-DBIC Opportunities & Resources

UVM Dairy Herd Management Technical Assistance

The University of Vermont Extension announces the availability of technical services to dairy farmers as part of the Northeast Dairy Business Innovation Center (NE-DBIC). The program will focus on delivering technical assistance to farm business managers who wish to engage teams of specialists, targeting specific areas of dairy management with the goal of making improvements to their operations and the bottom

NORTHEAST DAIRY BUSINESS INNOVATION CENTER

line. Technical service providers will work directly with dairy farm business owners to deliver outreach education to farm managers in the areas of milk quality, grazing and pasture management, dairy nutrition, animal husbandry, animal housing and facilities, and personnel management. If you have questions or would like to join the program roster, please visit: <https://bit.ly/3t4QME1>

Contact Tony Kitsos, Dairy Business Programs Specialist at tony.kitsos@uvm.edu or 802-524-6501 for more information.

Dairy Marketing & Branding Services Grant Closing Soon

The Dairy Marketing & Branding Services Grant

through the Northeast Dairy

Business Innovation Center will close on June 8 at 4 PM. This opportunity will provide funds to established value-added dairy processors in the Northeast U.S. to access professional marketing and branding services to elevate their businesses. Awards will range from \$10,000 - \$50,000 and a 25% match contribution is required. Apply now at: <https://bit.ly/3sVB661>

Grant Application Reviewers Needed

Are you interested in supporting innovation in the dairy industry across Vermont and the Northeast region? Join the NE-DBIC grant review team to lend your perspective and help select impactful grant projects from dairy farmers, processors, and producer associations throughout the Northeast region. Farmers, consumers, and supply chain stakeholders from Vermont and other Northeast states are invited to throw their hat in the ring! Learn more and fill out the brief application at: <https://bit.ly/3gGRhlw>

Questions about grants? Contact Kathryn Donovan at kathryn.donovan@vermont.gov or 802-585-4571.





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Funding for Farm Agronomic Practices

By Nina Gage, VT Agency of Agriculture, Food & Markets

The Agency's Farm Agronomic Practices (FAP) Program invests state funds in soil-based agronomic practices to improve soil quality, increase crop production, and reduce erosion and surface runoff from agricultural fields. The program is now open for applications for any practices planned July 1, 2021 to June 30, 2022.

The FAP program can provide funding for the following practices: conservation tillage (no-till), cover crop, crop to hay with or without a nurse crop, manure injection, and rotational grazing. Please submit one application for all practices planned until June 30, 2022. Applications which include Rotational Grazing

are due June 15, 2021. Applications which include cover cropping need to be submitted before August 1, 2021 or submitted 30 days prior to initial practice implementation for all other practices.

For the FAP program the Agency will review applications in order of receipt. The Agency advises farmers to plan ahead as best as possible for implementation of agronomic practices, especially when seeking financial assistance. If you are applying for rotational grazing, you must submit a grazing plan and map, clearly indicating which pastures you are seeking assistance for, with your application.

Please keep in mind that any applicant seeking assistance through FAP will be ineligible for financial assistance if the applicant is



Livestock move into a new grazing paddock with adequate residual vegetation left behind for improved pasture recovery.

receiving financial compensation for an equivalent practice under another state or federal agreement.

For more information on

the FAP program requirement and to apply go to agriculture.vermont.gov/fap. If you have specific questions about practice eligibility, or

how the FAP program works, you can contact Nina Gage at Nina.Gage@vermont.gov or 802-622-4098.

For Immediate Release

The Vermont Agency of Agriculture, Food and Markets have received an application for a Milk Handlers license from the following entity: Mountain Mozzarella LLA, Maplebrook on the Move DBA Maplebrook Farm, of Bennington, Vermont to process and package cheese within the State of Vermont. If anyone has germane information as to why or why not this company should or should not be licensed those comments are to be sent to:

The Vermont Agency of Agriculture Food and Markets
Dairy Section Office
116 State Street, Montpelier, VT 05620-2901

All written comments must be received by June 30, 2021.

At that time the Agency will make a determination as to whether a hearing will be held. If we determine that a hearing is necessary and you wish to attend please write to the above address attention Dairy Section.

Cleveland Farms

continued from page 5

dollar savings per week of each feed type: grain, corn silage, haylage and balage. In every month but July, Scott saved an estimated \$1,570 per week by having his cows harvest their own feed on pasture. In July, that savings dropped to \$644 per week. However, there is no doubt that if he hadn't adjusted the ration during the driest part of the summer, his overall savings would have been drastically reduced. In total, we estimated a \$34,000 savings in stored feed costs over a 25-week period. Savings were also realized in animal healthcare-related expenses, particularly with hoof health. Based on this, he figures a return on his initial infrastructure investment by early next grazing season. Scott

says, "I'm very pleased with how this went. I should have done this ten years ago."

What's Scott's vision moving forward? He says he's thinking about introducing more Shorthorn or Jersey genetics into his herd for their compatibility with his new system. He's also looking at his farm in a new way, thinking of where else he could be grazing. "The more you have fenced, the more options you have," says Scott. Then he'd have the flex-

ibility to crop or graze every field in proximity to his barn. Grazing the cover crops on his corn fields is another goal which could provide a few additional weeks on pasture and add to the above totals. It's clear that the value is there and as Scott summarizes, "It's worth the effort."

For more information about this project, contact Cheryl Cesario, Grazing Specialist, UVM Extension at cheryl.cesario@uvm.edu or 802-388-4969 x346.



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Produce Safety Bite: Irrigation Water

On-farm food safety tips for fruit & vegetable growers

By Ollie Cultrara, VT
Agency of Agriculture, Food & Markets

Produce safety is about protecting our fruits and vegetables from becoming contaminated with pathogens that can make people sick. Irrigation water can contain pathogens, but you can manage the risks associated with different sources and uses of irrigation water.



Surface water is highest risk

Surface water sources, such as rivers or ponds, have a higher risk of containing human pathogens than ground water sources, like wells, or public drinking water systems. Test surface

water sources for generic *E. coli* at least a few times during the growing season to understand the water quality. It is a good idea to test ground water, too. The Vermont Produce Program can provide information about water testing.

Check systems annually

Inspect water sources and irrigation systems annually for potential sources of contamination, such as cracks in well heads or animals or debris in pipes. Take steps to exclude wildlife and livestock from



surface water used for irrigation. Install backflow prevention devices on plumbing systems.

Irrigate intentionally

When possible, use drip instead of overhead irrigation to conserve water and decrease the likelihood of water contacting produce that grows above the soil. Extend the time interval between overhead irrigation and harvest to provide opportunity for microbial die-off from environmental exposure. UVM Extension can provide technical support on irrigation systems.

Get support

The Food Safety Modernization Act (FSMA) Produce Safety Rule (PSR) includes specific requirements for preventing contamination from agricultural water. Whether or not your farm is subject to the PSR, the Vermont Produce Program can help you take the next step in building food safety culture on your farm. Get in touch with our team at AGR.FSMA@vermont.gov, (802) 461-5128, or agriculture.vermont.gov/produceprogram

Virtual Dairy Experience Forum Held in July

Get up-to-date information on the rapidly changing food and beverage consumer landscape and learn what drives dairy demand. The Dairy Experience Forum (DEF) convenes members across the dairy supply chain from dairy farmers to processors and retailers. The forum will provide actionable consumer insights, future forecasting, and industry thought leadership.

This online event is free for dairy farmers! Discussions will address questions such as “what drives the Gen Z consumer to purchase dairy in the U.S.?” and “what global trends can I capitalize on as more dairy is shipped outside the U.S.”

Event Date: July 13, 2021, 12-5 pm

FREE registration for dairy farmers. \$35 registration fee for industry stakeholders. Register by June 11 and be entered to win one of several \$100 gift cards. View the full agenda and register now at: www.dairyexperienceforum.com

This event is hosted by the state and regional dairy checkoff organizations and the Northeast Dairy Business Innovation Center.



Calling Vermont Farmers!

Are you dedicated to community service, land stewardship, and advancing innovation on the farm?

If yes, you could be a great candidate for the 2021 Eric Rozendaal Memorial Award!

The Vermont Land Trust is accepting applications for a \$5,000 award to a Vermont farmer (including farm workers) who demonstrates these values, with a focus this year on response to the pandemic and/or racial injustice. To learn more go to <https://vlt.org/eric>

Applications close June 30.

Growing Works of Art

By Gwen Kozlowski, Vermont Urban & Community Forestry

The 2021 Growing Works of Art contest attracted a record 225 entries from 16 schools and 11 homeschool families.

The theme of this year's contest was Healthy Trees, Healthy Lives. Students were asked to create a drawing and written story to share how trees impact our health and our communities.

The contest is sponsored annually by the Vermont Urban and Community Forestry Program in partnership with University of Vermont Extension and the Vermont Department of Forests, Parks and Recreation. Entries were judged on originality and creativity (50 percent) and how well the students told their tree story (50 percent).

One winner was selected per grade and received a Vermont State Park punch pass.

This year's winners are:



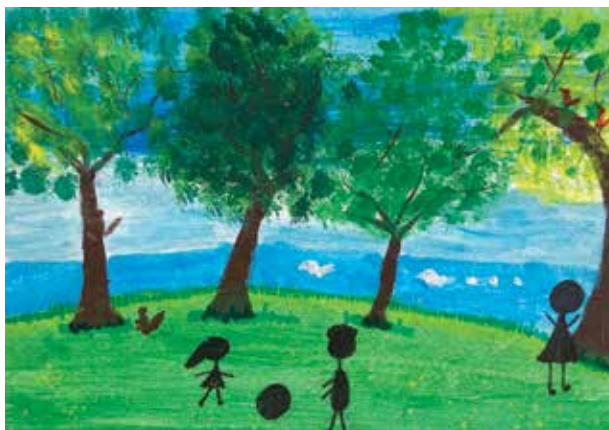
Kindergarten: Oawen White, Reading Elementary School, Reading



First Grade: Jasper Lawrence, home school student, Tunbridge



Second Grade: Chelsea Anker, Mater Christi School, Burlington



Third Grade: Jiya Sekar, Union Elementary School, Montpelier



Fourth Grade: Rowan Lawrence, home school student, Tunbridge; Rowan also had the top entry for his grade in both first and third grade in past contests.



Seventh Grade: Kalib Burbank, Sharon Academy, Sharon



Fifth Grade: Emma Haley, Middletown Springs Elementary School, Middletown Springs



Sixth Grade: Raxa Tariyal, Mater Christi School, Burlington



Eighth Grade: Amara Fuchs, Sharon Academy, Sharon

Mycorrhizae to Improve Water Quality

By Amelia Bruss, Poultney
Mettowee Natural Resources
Conservation District

Mycorrhizae are fungi that form a beneficial relationship with plants and that help carry water and nutrients to plant roots. Mycorrhizae have found their place in the conversation about improving soil health, but could they improve water quality as well?

A recent literature review by Jessica A. Rubin and Josef H. Görres of University of Vermont titled *Potential for Mycorrhizae-Assisted Phytoremediation of Phosphorus for Improved Water Quality* identified research showing that mycorrhizae can increase phosphorus uptake in crops, making these fungi a potentially important but little-used tool to improve water quality.

Rubin and Görres suggest that mycorrhizae speed up phosphorus reductions in three ways:

1. Decreasing the amount of phosphorus amendments needed.
2. Improving soil structure and vegetation establishment, which in turn would decrease erosion.

3. Redirecting phosphorus into plant roots and out of soil and water.

Mycorrhizae act as an extension of plant roots, allowing plants to access nutrients and water in parts of the soil that they otherwise could not reach. This increased access to nutrients can lead to 3-5 times higher phosphorus uptake by plants. With the help of organic acids, mycorrhizae can also biochemically access mineralized (unavailable) phosphorus. Some mycorrhizae even make secretions that aid in aggregating the soil, which reduces erosion by creating better soil structure that it is more permeable and can increase organic matter storage, in turn making phosphorus more readily available to plants. Therefore, the addition of mycorrhizae to field cropping practices can increase soil phosphorus availability and plant uptake, thereby reducing the amount of phosphorus added to soils as fertilizer and potentially decreasing phosphorus concentrations in surface water.

Adding mycorrhizae to riparian buffer plantings can also directly impact the amount of phosphorus and other harmful nutrients

entering waterways, not just because mycorrhizae increase plant interception of nutrients but also because they increase biodiversity below and above the soil surface and provide pathogen resistance, which can lead to better survival rates in plantings. This is especially useful in buffer zone plantings, where native trees and shrubs must outcompete invasive plant species.

Additionally, studies show that remediation practices can be more efficient with the addition of mycorrhizae. For example, in green stormwater infrastructure projects like green roofs, bioretention areas, and constructed wetlands, the addition of mycorrhizae

can significantly reduce P levels in leachate from these practices as they age.

Rubin and Görres are continuing research on this topic and are beginning a study looking at phosphorus uptake of willow and dogwood in soils with a range of phosphorus concentrations with and without mycorrhizae. They hope this research will prove that severe pruning of this type of wooded vegetation can be used to help remove phosphorus from the system. Additionally, those stalks could be used by conservation districts as willow stakes and in waddles for other watershed restoration projects.

While new research continues to identify more

tools to enhance soil health and protect our waterways, there are many accessible and practical ways to incorporate the use of mycorrhizae right now. As a farmer, you can inoculate mycorrhizae into your soil through commercially available products, such as sprays, water mixes, and seed inoculants. Reducing tillage and using cover crops naturally increase mycorrhizae establishment in fields.

Benefits of mycorrhizae extend beyond just better soil and plant health but in efficiency for farmers as well. Since mycorrhizae increase plants' ability to uptake nutrients, supporting mycorrhizae establishment

continued on page 14

NEW ENGLAND HONEY BEE UPDATE

Join the New England states Apiary Inspectors to "Lunch & Learn" by getting the latest updates on honey bee health and seasonal management recommendations for ensuring healthy colonies.

Bee sure to come prepared with questions to ask the inspectors!



Friday June 4, 2021

Friday August 6, 2021

Friday October 1, 2021



12:00pm-2:00pm EST



These events may not be recorded so Bee There or Bee Square!

Zoom Meeting ID: 952 9946 3401; Password: 404079

[https://zoom.us/j/95299463401?](https://zoom.us/j/95299463401?pwd=ZGF2bW1lOHVHR3R3Q2FHWMF5RUw3UT09)

[pwd=ZGF2bW1lOHVHR3R3Q2FHWMF5RUw3UT09](https://zoom.us/j/95299463401?pwd=ZGF2bW1lOHVHR3R3Q2FHWMF5RUw3UT09)

One tap mobile: +16465588656,,95299463401#,,,404079#

Vermont Farm Bureau is a grassroots not-for-profit membership organization dedicated to supporting Vermont farm families, agriculture and forestry.

We advocate for public policies that strengthen and grow our agricultural economy and conserve our natural resources.

www.vtfb.org



The unifying voice of
Vermont Agriculture

Contact Info: bees@mass.gov



Apiary Inspectors of America



CLASSIFIEDS

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Email: Agr.agriview@vermont.gov, phone: 802-828-1619. Deadline for submissions is the 1st of each month for next month's issue. Example: January 1st deadline for February issue.

Bees & Honey

Queens and nucs: Ready to go 5 frame nucs (you take box) for \$170; regular 5 frame (bring your own box) \$160! We are also selling 3# packages for \$140. A \$40 nonrefundable deposit is required on all nuc sales. Our Northern Survivor Queen prices are the same: \$32 unmarked; \$34 marked. See our website for order of eleven or more for pricing. These are our own hybrid queens from our northern survivor stock bred for the most favorable traits from various breeds. Please be advised we do not ship priority mail outside of New England. All other orders must be express! See our site for Covid-19 pick up stipulations. www.vtbees.com 802-948-2057

Cattle

Purebred Polled Hereford yearling heifers. Lull Brook Farm call: Alden Dana 802-436-2068 or email adana77@comcast.net.

Yearling beef steers and heifers \$500 to \$600 each. Beef going up and with good pasture possible to double money by fall, also beef cow calf combination \$1,000. 802-728-3760

22 Jersey cows 2 bred heifers. 4 fresh Jan, 2 Feb, 3 due Mar, 4 Apr, 1 May, 2 Jun. Can be reg. Feed grain hay pasture. 802-775-3846

3 breeding age bulls—one Hereford, 2 angus for breeding or beef. Asking \$850 each or will consider trading for Hereford heifers. 802-586-2857

Angus Bulls for sale good genetics, calving ease bulls.

Please call 802 533 9804. Greensboro, VT 05841

Registered Maine Anjou bull born 5-14-18 calves can be seen \$1000. Black Angus bull ready to breed \$1,000. 802-893-2514

Two Jerseys-crosses \$1,050/ bo, Hereford/ cross cow w/heifer yrly \$1350/bo, Normany/ Jersey bull \$650/bo and Jersey beef cow \$750/bo. Hinsdale 603-336-0017

Angus Bulls for sale. Greensboro, VT (802) 533-9804

Equipment

Reel Auggie 3250 mixer with scales on F-450 truck; IH 843 4 row narrow corn head; IH 7ft window head off 881 Harvester. Rutland, 802-770-0959

375 gal full tank \$100. CMT bale wrapper \$250. 2 bottom plow \$75. 802-426-3339

3000 gallon mueller bulk tank with 2-5 horsepower compressor. 802-487-4467

Mueller 500 gallon bulk tank with compressor in good condition \$800 OBO. Pequea model 250 3 pt hitch tractor saw with 30" blade — like new- \$1000 OBO. 3 pt hitch — 4 ft hydraulic log splitter \$1800 OBO 802-893-2262

Red cedar posts. 7ft \$5.00. Sharp \$5.50. 8ft \$6.00. Haylage 35/ton. 802-265-4566

Hesston 8550 S 16 ft. Discbine with merger. Cummins motor like new always been in shed stored. 4280 engine hours 3282 cutter hours \$41,000. IH 1486 tractor 160 hp. Deluxe cab AC low hours \$13,000. IH 1086

tractor 140 hp. New engine 54081000pto runs excellent \$6,500. IH 2350 loader fits both tractors \$2500. Pair 20.8-38 dials for \$1,000. 802-537-2435

2955 John Deere Tractor 4WD, platform with 740 loader, bucket, forks, bale grabber and rock bucket. 4450 John Deere Tractor 4WD, cab, 925 Mower conditioner with impellers. 802-236-4716

Used farm equipment, harrows, rakes, Tedder, all over 20 years old \$20 each. 1 Kaufman trailer 2001 \$150. Call 802-457-2613.

MicroDairy Design Pasteurizer for Sale 35 gallon max capacity and 5 gallon minimum, includes chart recorder, air space heater and thermometers. Can be used to make cheese, ice cream base, yogurt and kefir. Can also be used as a small bulk tank with additional equipment. Price \$8,500 Cobhillfrozenyogurt@gmail.com or call Jeannine at 802-436-2948.

John Deere 5510 tractor FWD, new tires. 3,453 hrs. Includes two extra rear tires with rim wheel weights \$19,000. Kuhn 8110 manure spreader. This twin auger side slinger is barely used and well maintained. \$11,500 Kubota 5400 DT-N Dual Traction narrow orchard tractor, AWD 1,800+ hours \$9,000 All equipment in great shape! 802-485-8428

2015 Houle manure spreader 5350 gallons. 2005 nh fp230 chopper. 4 steel wagons, 20 feet. 2016 Gehl skid steer 165 1 round baie wagon all steel 20 feet tandem krone rake and tedder everything is in excellent shape and more have sell cows for health reasons. 802-895-2945/ 802-323-8110. Call after 7 pm.

Grain equipment for sale - 2 gravity box wagons in good condition, one with auger, \$1,500 each, Beidler Family Farm, Randolph Center, 802-431-8530.

Loftness snow blower 7 foot. Double auger. Three point mounting. Hydraulic operated shoot. Great condition. Ready to use. Cat 2 or Cat 3 hitch. 100 hp or more to run. \$3,000. New these are \$8,500. Looking to move it. It's a terrific deal. Shaftsbury, VT. 781-307-6801.

Reel Auggie Mixer on F-450 with scales; IH 843 Combine cornhead; IH 8817 Windrow head; Gehl 350 Spreader; Case 580 backhoe; 850 Dozer for parts. Call 802-770-0959

IH 1486 tractor new tires good AC \$11,9000. IH 1086 tractor rice & cane tires runs good \$7800. JD 3 point hitch 6ft finish mower \$200. Full set of 10 weights and weight bar for IH magnum 1st generation tractors \$700. Pair of 20.8-38 duals with snap on rims \$800. IH 2350 loader \$200. 802-537-2435

8'x17' tandem trailer, all new wood. Great for moving round bales, \$850. 802-586-2857

John Deere 336 bailer very good condition always under cover \$2995; Kuhn GRS24 tedder \$955; Kuhn GA 3200GT Gyrorake very good condition \$1695; trail behind bale basket \$895; H&S 175 manure spreader with hydraulic gate, new bed liner and not rusted out \$2750; Behlan Country 8 ft diameter heavy duty stock tank \$195; round bale feeder \$175; 5-5gal glass carboys good for making hard cider, \$25 ea. Call 802-234-5653 email wsthaven@aol.com

Master-Bilt 34.5 Cubic Ft. two section ice cream hardening and holding cabinet.



\$4,500 Please call 802-436-2948 or e-mail Cobhillfrozenyogurt@gmail.com

Gehl haylage head Model HA1110 very good running shape, \$1,100. Fits most all Gehls. 333-4840

Krone EC400 13' disc mower, 540 pto. New, never used. Stored under cover. \$13,500. Craftsbury Common. 802-586-2516 or rshold@gmail.com. 015 Houle manure spreader 5350 gallons 2005 NH FP230 chopper 4 steel wagons 20 feet 2016 Gehl skid steer 165 1 round baie wagon all steel 20 feet tandem krone rake and tedder. Everything is in excellent shape; must sell cows for health reasons. 802-895-2945.

Case International 8340 mower conditioner, stored inside, in good condition. Running, was used last year during first cut. \$2,500 or best offer. 802-518-2155

228 Massy Ferguson hay baler like new 4,500. 400 bulk tank for sap or water. 8 back clade. call 802-895-4683 or 802-624-0143

24T Baler — always under cover & greased. Also, 1 for parts \$1950. 12-4-28 New tire \$175. 8N Ford newly done over complete motor job & new tire \$2500. JD 2y & Baler — pressure washed & greased — always undercover \$1,500. Also I for parts. 802-552-3356

7 gal stainless steel milking bucket with lid and pulsator for two goat milking \$200. Includes milk lines, inflations. 802-563-2999

Gehl 7200 Flail Chopper 2600. White 6 row corn planter \$1,500. Case 1830 skid steer \$900. 802-893-2514

H&S 175 manure spreader with hydraulic gate, very good condition, recently replaced bed liner, not rusted out. \$2,750. Call 802-234-5653, email wsthaven@aol.com.

CLASSIFIEDS

General

High tunnel greenhouse assembly & maintenance: Ledgewood, Harnois, Rimol and more. Complete assembly, end wall construction, poly installation, renovation, and repairs. Experienced and professional. Plan ahead! Get in touch now to get on the 2020 schedule. Contact Mike Feiner at feinervt@gmail.com, www.vineripe.net, (802) 498-8031.

250 Five gallon pails with handles, \$1.75 each. 802-999-4644

Red Cedar fenceposts. 7 ft sharp \$6. 8 ft sharp \$7. 802-265-4566

Hay, Feed & Forage

Quality Canadian hay for sale, big/small squares wrapped, or unwrapped, round bales wrapped or unwrapped, 1st, 2nd, 3rd cuts available. Switch grass and straw available, call Richard at 802-323-3275

Square baled hay – top quality, vof certified organic, generous sized. 1st cut \$4.50/bale, 2nd cut \$5.50/bale at the barn in Barnet. 802-592-3088

2019 1st cut Timothy and clover hay \$5.00 a bale plus delivery fee. 603-256-8422.

1000 tons corn silage, processed in Colchester. 50 @ ton 802-272-3478 or 802-223-1370 or email sethgardner@hotmail.com

Excellent quality first cut wrapped round bales; baleage. Shelburne VT Call Andy 802-598-6060. Analysis available upon request.

2019 1st cut 4x4 wrapped round bales for sale \$40/bale, 2019 2nd cut 4x4 wrapped round bales for sale \$45/bale, South Pomfret, call Tom at 802-457-5834

2nd & 3rd cut haylage and corn silage for sale. Call Peter Gebbie 802-533-2984, leave a message.

Organic haylage 12% protein \$45 per ton, 15% protein \$55 per ton 802-537-2435

4x4 round balage mixed grains cut late June; \$30. 802-325-3707

ADDISON COUNTY

Large squares available in Addison, Vt. Hay is stored undercover. Looks like a long winter ahead of us. Call now and make sure you have enough. Contact S.L. Moore at 802-463-3875.

1st cut 4x5 round bales never wet. Good horse & cow hay. 802-948-2627 or 802-558-0166

Certified organic, small square bales always stacked and stored under cover, 35-40lbs/bale. \$4/bale, discounts available for large quantities. Call 802-989-0781.

Hay for Sale in Addison, VT. Large square bales and small squares. \$50-60 for Large, \$3.50-4.50 for Small. Delivery Available. Call Jack 802-989-8968

Hay for sale. \$3.25 bale. 802-377-5455

73 1st cut 5ft diameter round bales. \$30-\$35. Orwell 802-948-2211

Straw for sale: \$7/bale for 50 or more. \$8/bale for less than 50, \$6/bale for all in the barn, approx. 350. from our winter rye harvest in August. certified organic. Thornhill Farm, Greensboro Bend, 05842, todd@thornhillfarmvermont.com, 802-441-3176

BENNINGTON COUNTY

Corn Silage 1000 ton plus. Haylage 500 ton plus. Round bales 4x4. Square bales small. 802-394-2976

Vermont Fairs & Field Days

Please visit vtfairs.com to get the most up-to-date information as to the status of our favorite Vermont fairs and field days!

CALEDONIA COUNTY

Square baled hay- Top quality, VOF certified organic, generous sized. 1st cut \$4.50/bale, 2nd cut \$5.50/bale at the barn in Barnet. 802-592-3088

CHITTENDEN COUNTY

Round bales for horses. Clean first cut timothy mixed grass, quality net wrapped 4' X 5' bales. Never wet. \$45. each. 802- 879-0391 Westford.

15 large 5x5 round bales mixed grass w/some timothy and clover 800+lbs \$50 each. Call 899-4126.

FRANKLIN COUNTY

Good Quality Hay 1c & 2c from western US & Canada. Alfalfa orchard & orchard sweet grass 18 to 20% plus protein large bales & organic by trailer loads. Large or small square bales of straw whole or processed at farm we load on direct delivery by trailer load. Mountain View Dairy Farm 802-849-6266

LAMOILLE COUNTY

Organic baled straw. \$5.50/bale. Certified Organic. Valley Dream Farm, Cambridge, VT. 802-644-6598. email: valleydream@myfairpoint.net.

ORANGE COUNTY

2019 first cut square hay bales for sale. \$4.00 per bale. Delivery available. Bonnie Kennedy, Chelsea, VT. 802-685-2292.

Approximately 375 tons of high quality grass and clover first and second cut, cut extremely early in 2018. First finished May 22, second finished July 2nd. Tests high in energy and protein. 45% harvested "hay in a day" \$50 per ton. Chris 802-522-9485

ORLEANS COUNTY

Pure alfalfa for sale and also 1st, 2nd and 3rd cut big/small squares, round bales, wrapped or unwrapped, straw and switch grass. Call Richard at 802-323-3275

Organic certified silage for sale: We will deliver from our farm or you can pick up.

Call for prices and delivery charge. 1-802-744-2444 or 802-274-4934 or 802-744-6553.

2nd & 3rd cut haylage and corn silage for sale. Call Peter Gebbie 802-533-2984, leave a message.

RUTLAND COUNTY

First cut 4x5 round bales. 802-265-4566

Good quality 1st and 2nd round bales available, wrapped and dried please call 802-446-2435.

4 x 4 wrapped bales for sale. Please call either 802-247-6076 or 802-236-0144

WASHINGTON COUNTY

200 – 4x4 round wrapped bales 1st \$45. 802-229-9871

WINDHAM COUNTY

2017 4x4 wrapped baleage 1st & 2nd cutting certified organic good quality \$40 per bale 802-254-6982

1st cut 4x5 round bales. Don Pettis 802-265-4566

2018 4X4 wrapped baleage. June cut. Certified organic, never wet. \$40.00 per bale, quantity discount. 802-254-6982

1st cut hay. Good horse hay. \$4.50 bale 802-254-5069

WINDSOR COUNTY

Hay for sale-400 square bales, Reading, Windsor County VT. \$3.50 per bale at the barn. Call 802-484-7240

4x5 dry round bales \$45.00 delivery available. 802-457-1376

Rolling Meadows Farm: square bales in the field or barn \$4.00. Delivery can be arranged at \$5.50. Very nice hay from fertilized fields in the South Woodstock and Reading area. Call 802-484-5540 or goodfarmvt@gmail.com. Ask for David

1st. cut dry round bales for sale. Never been rained on, stored under cover. \$50. @ 1st. cut haylage bales for sale. \$45. Rte. 5 Weathersfield Bow 802-546-4340.

Dry Round Horse Hay, \$50/ Bale. 200 Bales left. Call 802-356-5030.

Wanted

Kuhn FC350GMower or will sell mine for parts 802-728-3760

Family cow, fresh April-June. Ideally 100% grassfed and A2. Organic a plus. lathefarm@gmail.com or 802-586-2401

Employment

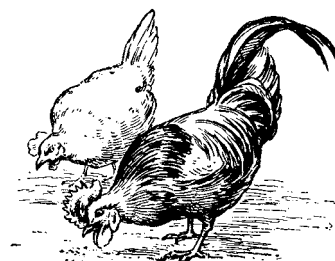
Vegetable Farm, excellent soils, location & irrigation. Transition to new owner. Go to: www.Lewiscreekfarm.com/ManagetoOwn.htm

Farm & Farmland

For Lease - 10 acres of organic meadow in Brandon, currently in alfalfa. Producing roughly 12-15 tons per year in dry hay. Three year lease available, price negotiable but approximately \$600/yr 802-247-8459

Horse Training Farm: 17 plus acres with X-C obstacles, galloping track, stadium jumps, full size ring, covered small arena, trails. 3 stall stable with paddocks, tack/feed room, hay storage. 4 pastures have board fencing. Open concept cape farmhouse has 3 bedrooms, office, sun room, deck, fiber optic internet, solar, 2 car detached garage. Workshop, equipment storage, chicken house, gardens, orchard, stream, woods, views. Convenient to Dartmouth College and DH Medical Center. Comes "turn key, as is". \$675,000. 802-785-4410

Opportunity for Barn Lease in Williston Summer 2020: Well-maintained farm residence with equine barn, stalls, and pasture for up to four animals. Call Robin at 802-434-2788 for details.



Why is Animal Disease Traceability Important to You?

By Dr. Kaitlynn Levine, VT
Agency of Agriculture, Food &
Markets

The Animal Health Section of the Vermont Agency of Agriculture, Food, and Markets protects the health and welfare of Vermonters, their livestock and poultry by advancing a safe and secure food supply. This mission includes responding to potential outbreaks of animal disease with specific strategies, including Animal Disease Traceability (ADT).

ADT is an effort to ensure that if a disease breaks out, all the animals involved can be identified and their movements known. A speedy

resolution to any disease outbreak will minimize business disruptions and lessen the response cost, which benefits Vermont agriculture.

From farm-of-birth to your kitchen table, the ideal ADT system would be able to track all livestock movements. This is no small undertaking as in the first three months of 2021, over 72,000 animals moved in or out of Vermont. Each of these was tracked via a Certificate of Veterinary Inspection and recorded in state and national databases.

The easiest and best way to track livestock throughout their lives is by ensuring every animal has official identification. The Animal

Health Section of the Agency of Agriculture, Food, and Markets has been making great strides throughout the state and various levels of industry to help ensure each animal has an official identification and all livestock meet Vermont's ADT requirements.

The cover story of the February edition of *Agriview* widely announced free RFID tags for bovine producers, and the response was enthusiastic. RFID tags are considered an integral part of

an ADT strategy. As of April first of this year, 47,000 tags have been distributed to Vermont farmers and businesses. Agency Animal Health Specialists delivered the tags, educated farmers on their use, and reviewed the state and federal ADT requirements with each farmer. This same team has also met with every licensed slaughter facility in the state to ensure proper record keeping, including the official ID of each animal that passes through their doors.

Those meetings included a review of existing records and resulted in nearly 200 letters of information being sent directly to farmers with instructions on how to request free ID tags.

The Agency also released a video about the benefits of these tags with the help of a local farmer putting them to good use. If you have cattle and need tags, please call the Animal Health Section (802) 828-2421 or email your request to agr.animalhealth@vermont.gov

Hemp Registration Reminder

The Vermont Agency of Agriculture, Food and Markets is reminding individuals who want to grow or process hemp to register with the Hemp Program online at hemp.vermont.gov. Applicants to the program can pay for registration online, and once approved can access a copy of their registration and print maps of cultivation, drying and storage areas, processing locations and other mapped information from the registrant's account. A person must register annually as part of the Hemp Program in order to grow or process hemp in the state.

Farm Assistants: Full time-Year round positions
Farms for City Kids Foundation at Spring Brook Farm, in Reading, Vermont, is looking for Farm Assistants with a broad and well-rounded skill set to help with a wide variety of farm tasks. We are seeking individuals with a strong work ethic, desire to learn, works well as part of a team, and willingness to help wherever needed on the operation. Ideally the applicants will have experience operating farm equipment, and be familiar with haying & sugaring operations. We offer on the job training, competitive wages and an Employee Benefits Package. For further information about the farm, visit: farmsforcitykids.org. You may call Tatiana at 802-484-1236 x 200. Please send resumé to: Office@sbftvt.org



New Grants Calendar Available

The Agency of Agriculture, Food & Markets is pleased to be able to help you more easily identify upcoming grant opportunities. Please go to <https://agriculture.vermont.gov/grants/calendar> for more information.

Programs Open Year-Round
Farmstead Best Management Practices (BMP) Program
Technical and financial assistance for engineered conservation practices on Vermont farms.
Jenn LaValley
Jenn.LaValley@vermont.gov
(802) 828-2431

Pasture And Surface Water Fencing (PSWF) Program
Technical and financial assistance for pasture management and livestock exclusion from surface water on Vermont farms
Kaitlin Hayes
Kaitlin.Hayes@vermont.gov
(802) 622-4112

Grassed Waterway and Filter Strip (GWFS) Program
Technical and financial assistance for implementing buffers and seeding down critical areas on VT farms
Sonia Howlett
Sonia.Howlett@vermont.gov
(802) 522-4655

Conservation Reserve Enhancement Program (CREP)
Implementation costs of vegetated buffers and rental payments for maintained buffers on Vermont agricultural land
Ben Gabos
Ben.Gabos@Vermont.gov
(802) 461-3814

Phil Wilson
Phillip.Wilson@vermont.gov
(802) 505-5378

June
Goat & Sheep Dairy Supply Chain Impact Grant
Grants for projects that address supply chain challenges for existing goat and sheep dairy businesses

Kathryn Donovan
Kathryn.Donovan@vermont.gov
(802) 585-4571

August
Dairy Food Safety Certification Grant
Grant funding to support food safety improvements including technical assistance, audits, plan writing, and infrastructure upgrades
Kathryn Donovan
Kathryn.Donovan@vermont.gov
(802) 585-4571

Fall 2021 (Biennial)
Agricultural Clean Water Initiative Program
Grants for water quality initiatives by supporting farmers with education and outreach, technical assistance, identifying and implementing best management practices, planning, and more
Nina Gage
Nina.Gage@vermont.gov
(802) 622-4098

Guidance on How to Take Post-Harvest Hemp Samples

By Michael DiTomaso, VT
Agency of Agriculture, Food & Markets

Sampling processed hemp concentrate, hemp products or hemp infused products for laboratory analytical testing can be tricky. The steps include determining the correct number of tests to be conducted, collecting enough material to conduct testing, and making sure the sample is a representative composite of the material to be tested based on volume of a process lot, or packaged products.

To help registered processors navigate this process, the Vermont Agency of Agriculture,

Food and Markets' Hemp Program offers the Post-Harvest Sampling Guidance, a document focused on post-harvest sampling of process lots. If followed, a person can be confident that samples taken for compliance purposes are representative of process lots. Registered processors are required to have all process lots tested for potency and contaminants and using this guidance can help make sure process lots are sampled effectively.

Reliable sample collection post-harvest of process lots is important. Making certain that all samples represent a homogenous composition of the process lot improves the quality and consistency

of the sample. The Post-Harvest Sampling Protocol describes methods for taking representative samples for three types of process lots:

- Trim Flower
- Liquid /Solid Concentrates
- Un-packaged or pre-packaged retail units

For each process lot type, the protocol uses diagrams to illustrate how samples should be taken and describes the method and pattern of sampling. For example, the guidance discusses how to take a sample from 1kg of liquid concentrate in a glass



jar and suggests bringing the concentrate to room temperature, inverting the container three times, and then illustrates taking sample increments throughout the container.

The post-harvest guidance addresses the number of sample increments that should be taken per composite sample, based on the type and size of process lot. This information is clearly presented by process lot type in tables at the end of the document.

Along with the Post-Harvest Guidance, the Hemp Program provides a Post-Harvest Sampling Form, which can be used to document and record the sampling process.

Post-harvest sampling is another important piece in ensuring that process lots are safe for the consuming public, and processors who follow the guidance can be



assured that their products effectively comply with all potency and contaminant testing requirements.

Questions regarding the protocol, or testing requirements for process lots, can be directed to Robert Shipman Robert.shipman@vermont.gov, or Michael DiTomaso Michael.ditomasso@vermont.gov.

The Post-Harvest Sampling Guidance and Post-Harvest Sampling Form can be found on the Hemp Program's Resources and Guidance page along with many other resources addressing hemp cultivation and processing in Vermont, <https://agriculture.vermont.gov/public-health-agricultural-resource-management-division/hemp-program/hemp-resources-and-guidance>.

yields.

Jessica Rubin and Josef Görres are accepting any further questions from the public on their research. You can reach them at Jessica.Rubin@uvm.edu

Register Now for Open Farm Week August 8 - 15, 2021

Farm registration is open for the 7th annual Open Farm Week, taking place at Vermont farms August 8-15, 2021! This special week in August is a way for farmers to engage with their customers and communities and an opportunity for folks to visit farms and connect with Vermont's working landscape.

Farms can host an event on any or multiple days of the week. Attendees look for activities, farmer interaction, and unique events as well as any regular programs or just being open to the public. Feel free to get creative!



Technical assistance is available

The Open Farm Week team is available to support farms in developing event ideas and preparing for visitors. The team can help you design activities that work for your farm and community, along with a timeline, marketing plan, and safety plan. Technical assistance looks different for every

farm, and the team can work with you to meet your needs. There is no additional charge for this technical assistance, and you can request assistance via the Open Farm Week registration

form. Technical assistance availability is limited, so don't wait to register.

We are all looking forward to getting out and enjoying Vermont this summer, especially during Open Farm Week! Find more information and register now through July 1 at diginvt.com/blog/openfarmweekforfarmers

Mycorrhizae

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reduces the need to apply inputs such as phosphorus fertilizers and decreases time spent applying those inputs, while oftentimes increasing plant biomass and crop

Northwest Vermont Solid Waste Management District Continues Development and Expansion of Single-Use Agricultural Plastic Recycling Program

By Hen Joyner, Northwest Vermont Solid Waste District

Every year, Americans send nearly 30 million tons of plastic to landfills across the country. Recycling rates of plastics in the US have stagnated at only 9% over the past decade according to the EPA. Despite low recycling rates, the production of single-use plastics across all industries has increased dramatically during the past decade to nearly 400 million tons a year globally, with over 7 million tons being produced annually for agricultural use.

With over 6,000 farms across the state, Vermont is no stranger to the complications of single-use agricultural plastics. Plastic products such as bale wrap, maple tubing, bunker cover, drip tape, polycarbonate spouts, and mulch are a necessity for many producers across the state, and options for disposal are limited. According to the Vermont Agency of Agriculture, Vermont dairy farms generate about 500 tons of plastic annually in the form of bale wrap, bunker cover, and other plastic products necessary for economical and efficient dairy production. In addition to the plastic waste generated by dairy farms, beef farms use about 77 tons of plastics annually and syrup producers generate over 160 tons of used maple tubing each year. Many of these plastic products end up in Vermont's only landfill at a

cost to farmers due to a lack of alternatives.

Problems like this demand innovative, industry-disrupting solutions. To respond to this demand, Northwest Vermont Solid Waste Management District (NWSWD) has prioritized diverting post-consumer plastics away from our landfill and into the hands of processors utilizing state-of-the-art technology to produce high quality products from post-consumer plastic materials. Since the implementation of our single-use agricultural plastic recycling program in 2014, NWSWD has established disposal alternatives for maple sap tubing, bunker cover, bale wrap, and, as of this year, polycarbonate spouts. These products, instead of being landfilled, will be shipped to recycling facilities where they will be processed and recycled into fuels, post-consumer resins, and new plastic products. Prior to the development of this program, Vermont's one landfill was the only local disposal option available to producers wishing to remove used agricultural plastic from their properties. Now, by providing local producers with waste management alternatives in Northwest Vermont, NWSWD is setting the stage for a potential collaborative waste diversion effort among all solid waste districts in the state.

Post-consumer plastics diversion is a critical component of building a sustainable future. NWSWD will continue to work with post-

consumer processors who are prioritizing the development of innovative waste management solutions as we strive to fulfill our mission of pro-

viding efficient, economical, and environmentally sound waste disposal and reduction services to all Vermonters.

Local producers are may

contact NWSWD with questions regarding the disposal of their agricultural plastics by email info@nswsd.org or by phone 802-524-5986.

Accessory on Farm Businesses

Expanding and Supporting Vermont Farms

By Kaitlin Hayes, VT Agency of Agriculture, Food & Markets

Farmers worldwide have been actively seeking ways to broaden their income revenue streams and support growing interests through diversification of their farming operations. These additional accessory businesses compliment traditional agricultural activities while increasing the public audience that is drawn to the farm. Accessory businesses in Vermont can include the hosting of on-farm social events, farm tours and stays, or the sale of products from the farm operation and from fellow producers to offer a greater variety of delicious local agricultural products at one location.

The Accessory On-Farm Business (AOFB) statute was passed by the Vermont Legislature in 2018 with the support of the Agency of Agriculture, Food and Markets (the Agency) and many other partners. AOFBs are add on businesses for farm operations that cannot be prohibited by local municipalities, although the business may be required to

go through local site plan review as part of their establishment, if the respective town has applicable zoning ordinances. Only farms that fall under the jurisdiction of the Agency are eligible to have AOFBs present on their farm. The Agency can help farmers determine whether they meet this threshold. Farms that are eligible for AOFBs are required to comply with the Required Agricultural Practices (RAPs) Rule, you can learn more at agriculture.vermont.gov/rap.

Accessory businesses that are eligible as an AOFB must meet one or both of the following descriptions:

- The storage, preparation, processing, and sale of qualifying products, provided that more than 50 percent of the total annual sales are from products that are principally produced on the farm at which the business is located.
- Educational, recreational, or social events that feature agricultural practices or qualifying products, or both. Such events may include tours of the farm, farm stays, tastings and meals featuring qualifying

products, and classes or exhibits in the preparation, processing, or harvesting of qualifying products.

Expanding and diversifying operations and customers can be a great opportunity for farms. The Agency is working with local municipalities as they establish AOFB permitting, and can provide guidance for navigating the process. AOFBs, unlike the farm operation, are determined and regulated by the municipality. The Agency's role is determining whether or not a farm is eligible for an AOFB.

For information on AOFBs, see agriculture.vermont.gov/land-use-renewable-energy-0/accessory-farm-business. To determine if your farm is eligible for an AOFB, please submit a farm determination request (only needed for farms not already certified or permitted with the Agency) available at this link: agriculture.vermont.gov/form/farm-determination-form

For questions regarding AOFBs, or to discuss setting up an informational discussion in your town, contact Kaitlin Hayes at Kaitlin.hayes@vermont.gov

Apiary Update

By Brooke Decker, VT
Agency of Agriculture, Food
& Markets

Did you know that honeybees are not native to North America and that Vermont has more than 300 native bee species? Bumblebees are likely the most recognizable native bee, as they are quite large and easy to identify. Often overlooked are the other hundreds of native bee species in Vermont. There is huge diversity among the native bee populations. Some bees, like the sweat bee are tiny, some bees are metallic colored, some are ground nesting and some nest in hollow stems of plants. Many native bees are solitary, some are communal, but most do not live in large colonies like the honey bee.

While many insects feed on flower nectar and pollen, bees are considered the most effective pollinators, due to in part to their fuzzy bodies that effectively gather pollen while visiting plants.

While gathering nutritional sustenance of nectar and pollen for themselves and their young, they provide a great ecosystem service to the flowering plants they visit. The transfer of pollen from flower to flower is essential for many flowers to complete their lifecycle. Simply put, bees need flowers and flowers need bees. It's a beautiful and mutualistic relationship.

Pollinator populations are in decline. Bees are facing many challenges. Disease, lack of nutritional forage,



and habitat loss have been identified as major contributors to population declines.

But there's hope. What can be done to help the bees? Beekeepers can manage effectively for Varroa mites, which vector viruses that can potentially spread to some native bees.

What can non-beekeepers

do to help the bees? Providing and conserving habitat for bees is extremely beneficial. This can be as simple as mowing less and encouraging a natural flowering landscape or can be more involved to include planting a variety of flowering plants and trees that provide nutritional resources throughout the season. Check out the regional guide found at <https://www.pollinator.org/PDFs/Guides/Adirondackrx3FINAL.pdf>

Celebrate pollinator week June 21-27th check out [Pollinator.org](https://www.pollinator.org) for more information.

If you have questions about keeping bees and state regulations, please contact Brooke Decker by email brooke.decker@vermont.gov or by phone 802-272-6688.

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Every time you sell live cattle of any age, breed, purpose or number directly to another person, you are responsible for making sure that the \$1-per-head beef checkoff assessment is sent to the Vermont Beef Industry Council.

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